DAQ Status

- Requirements document (first pass, not reviewed)

- Starting on functional specs

- Various WBS items may be merged

  - DAQ hardware
  - DAQ software
  - control/monitoring & timing
  - control room
  - test stands

  or some costing moved to DAQ

  - trigger buffers and links
  - data storage

http://home.fnal.gov/~votava/experiments/
btev/online

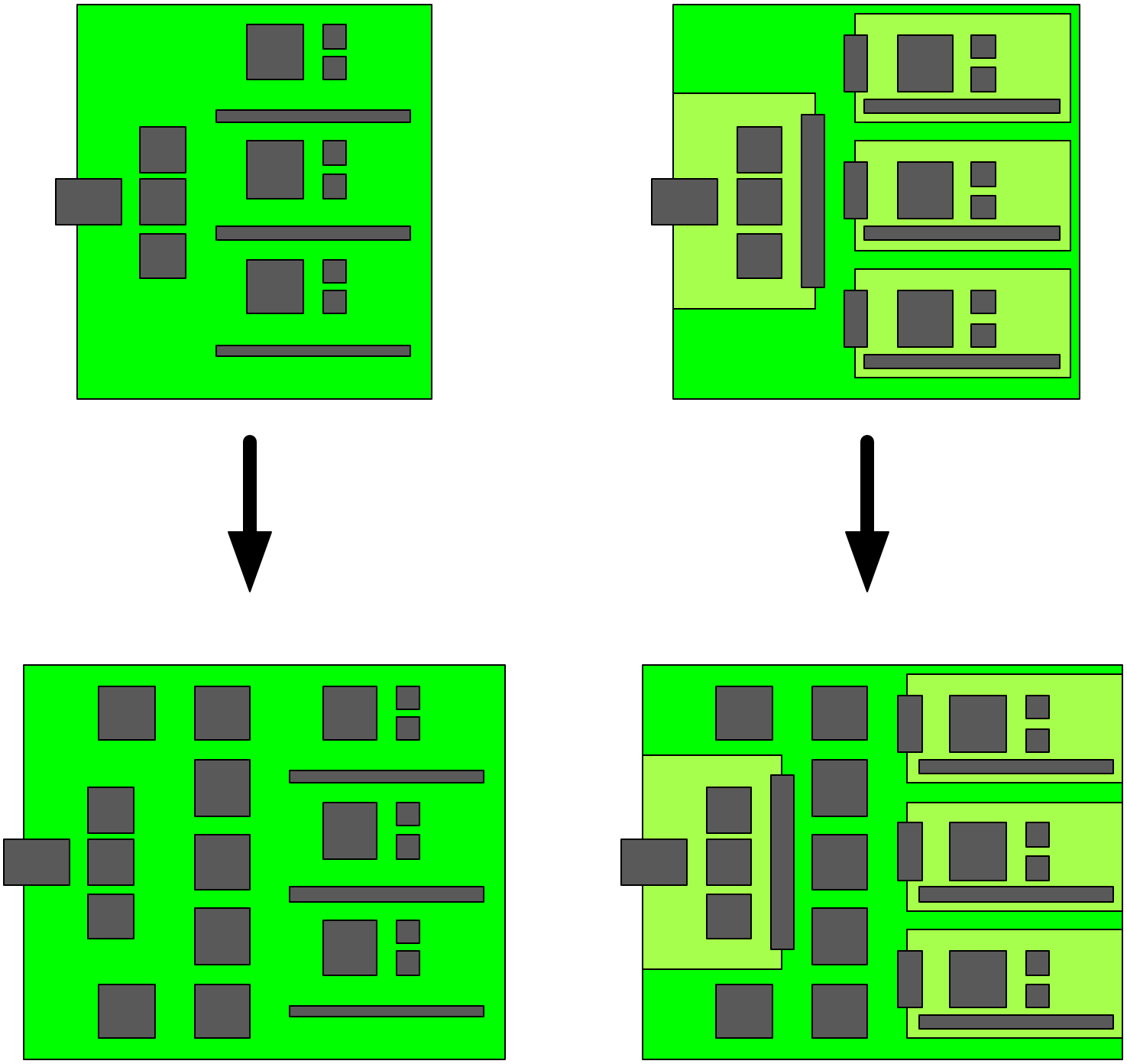
DAQ Status (system architecture)

- Original WBS design optimized for minimum hardware cost

- Now looking at ways to reduce software costs, design time, system complexity (even if small increase in hardware cost)

- Examples:

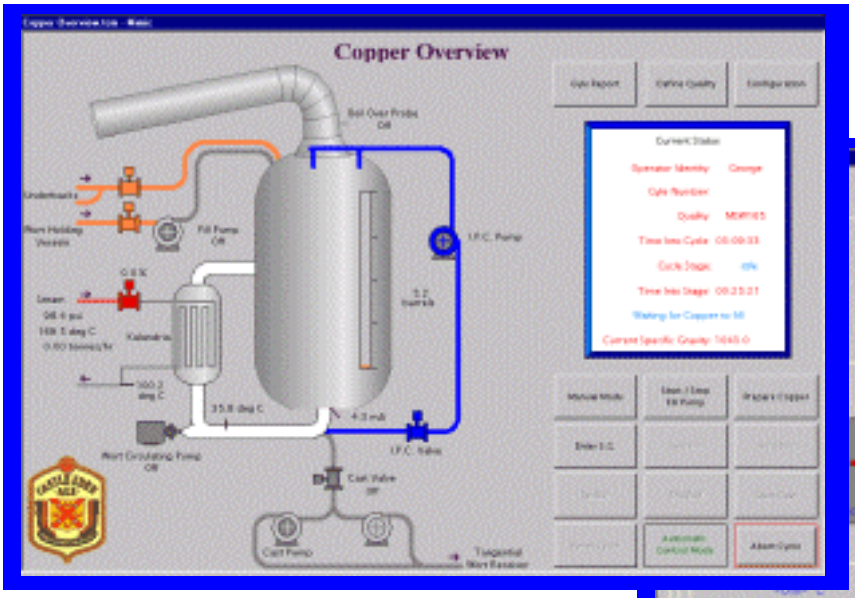
  - modular links and buffers
  - independent output network (Ethernet)
  - full vs. partial readout
  - more commercial components

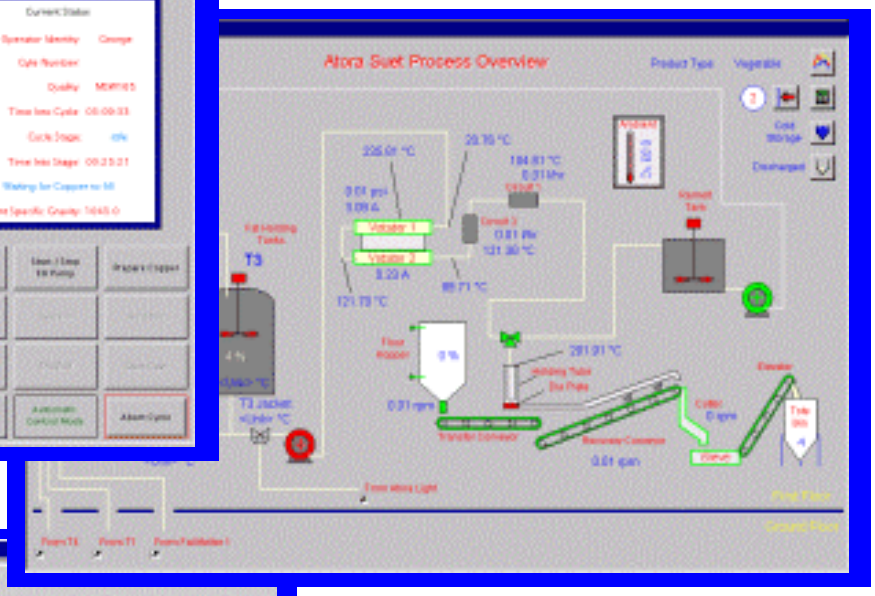


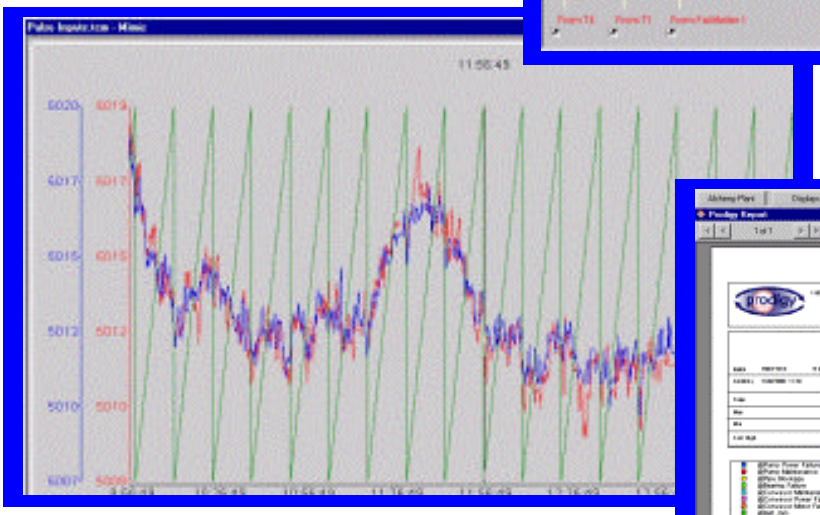
Trigger Upgrades

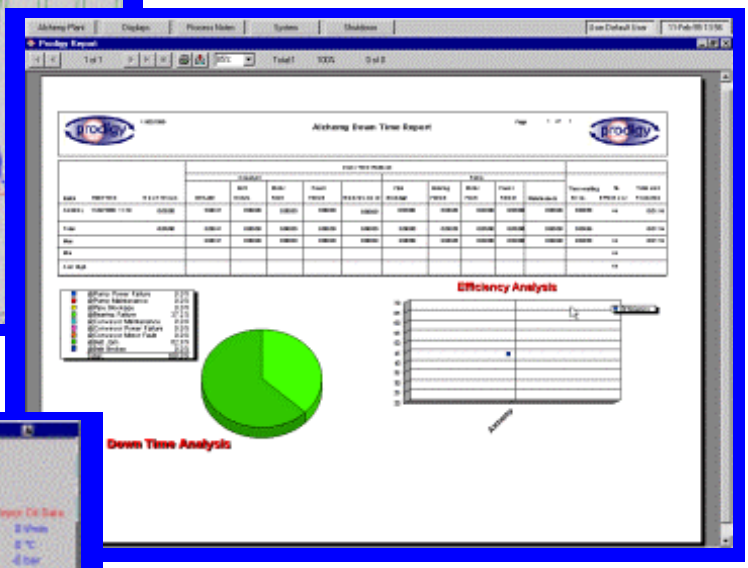
Modular links and buffers cost more initially, but may save money in upgrades.

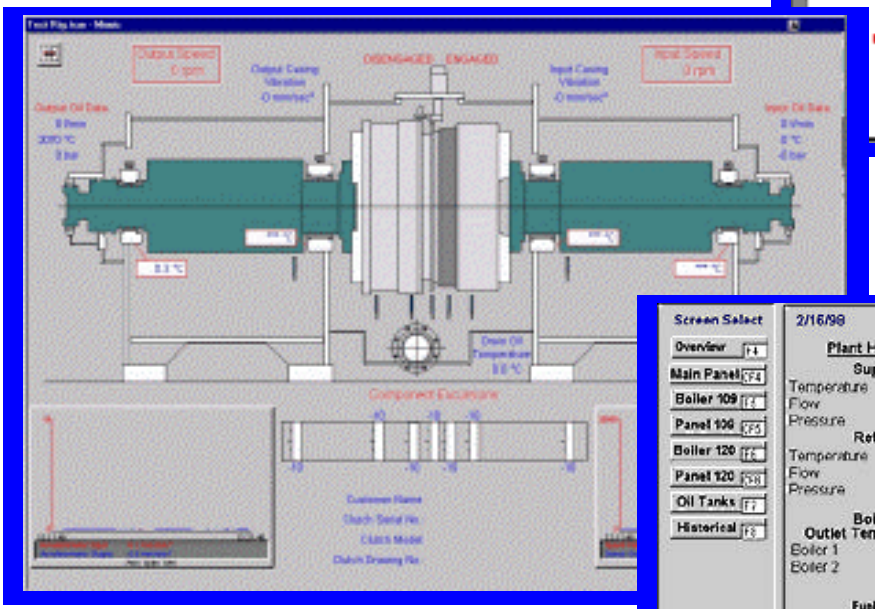
Slow Controls

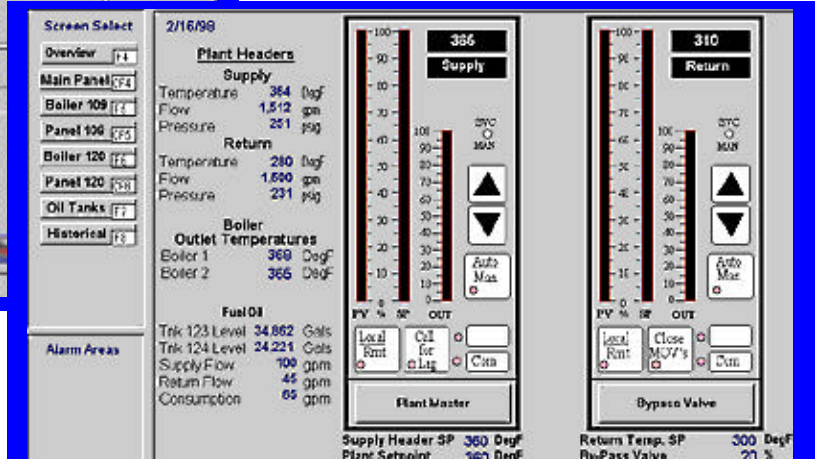












Slow Control/Monitoring

Assumptions:

- Mostly commercial software (SCADA or DCS)
- Mixture of commercial and non-commercial hardware
- Not useful for large data transfers (FPGA downloads, detector parameters, etc.) or fast monitoring functions

- Big BTeV collaboration opportunity

Data Storage

Hard Disk	~ $3.20/GByte	~ $19M/yr
Tape	~ $1.40/GByte	~ $8M/yr
CD-R	~ $0.30/GByte	~ $2M/yr
CD-RW	~ $0.50/GByte	~ $3M/yr

Summary Questions

- What are real data rates? Is DAQ target 100 Kbytes/event (750 GBytes/sec) or 200 Kbytes/event (1.5 TBytes/sec)?
- What is probability of additional L1 Triggers?
- Should we consider other storage options?
- How many slow control endpoints are there in the system? Others interested in working on this?